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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/800,597   | 03/15/2004  | Cory Allen Jackson   | CTG 001.01          | 1788             |
| 37471  | 7590        | 04/12/2006           | EXAMINER            |                  |
| W. ALLEN MARCONTELL<br>P.O. BOX 800149<br>HOUSTON, TX 77280-0149 |             |                      | HUSON, MONICA ANNE  |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 1732                |                  |
| DATE MAILED: 04/12/2006  |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/800,597 | <b>Applicant(s)</b><br>JACKSON ET AL. |  |
|                              | <b>Examiner</b><br>Monica A. Huson   | <b>Art Unit</b><br>1732               |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 1/11/06.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-16 and 22-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-16 and 22-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This office action is in response to the Amendment filed 11 January 2006.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the instant specification, in view of Godfrey et al. (U.S. Patent 5,292,780).

Regarding Claim 11, the instant specification shows that it is "characteristic" and "traditional" to carry out a method of forming a PVDF article (para 0025-0026), comprising the steps of forming a product blank profile from a PVDF foam (para 0025); placing said product blank in a mold between platens of a heated molding process (para 0026); volumetrically compressing said product blank between said platens (para 0026); and holding the compressed and heated product for a time (para 0026). The instant specification does not show that it is "characteristic" and "traditional" to compress to a specific compression ratio at a temperature between 300F and 350F for a time to displace air from the foam. Godfrey et al., hereafter "Godfrey," show that it is known to carry out a method for compressing polymers including volumetrically compressing the product blank between platens by a ratio of 7:1 while heating said blank between 300F and 350F and holding said compressed and heated product for a time

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sufficient to displace substantially all volatiles from said PVDF foam (Column 3, lines 23-26, 34-36, 39-41). Godfrey and the instant specification are combinable because they are concerned with a similar technical field, namely, methods of compression molding polymer materials. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Godfrey's molding conditions as processing parameters during the instant specification's molding process in order to produce an article that requires presence of such processing parameters.

Regarding Claim 14, the instant specification shows that it is "characteristic" and "traditional" to carry out a method of forming a PVDF article (para 0025-0026), comprising the steps of forming a product blank profile from a PVDF foam (para 0025); placing said product blank in a mold between platens of a heated molding process (para 0026); compressing said product blank between said platens (para 0026); and heating the compressed blank profile (para 0026). The instant specification does not show that it is "characteristic" and "traditional" to compress to a specific compression ratio at a temperature between 300F and 350F for a time to displace air from the foam. Godfrey et al., hereafter "Godfrey," show that it is known to carry out a method for compressing polymers including volumetrically compressing the product blank between platens by a ratio of 7:1 while heating said blank between 300F and 350F and holding said compressed and heated product for a time sufficient to displace substantially all volatiles from said PVDF foam (Column 3, lines 23-26, 34-36, 39-41). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Godfrey's molding conditions as processing parameters during the instant specification's molding process in order to produce an article that requires presence of such processing parameters.

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Claims 12, 13, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the instant specification and Godfrey, further in view of Hurley et al. (U.S. Patent 5,938,878).

Regarding Claim 12, the instant specification shows the process as claimed as discussed in the rejection of Claim 11 above, including showing using PVDF foam sheets, but it does not show that compressing stacked sheets is “characteristic” or “traditional”. Hurley et al., hereafter “Hurley,” show that it is known to carry out a method wherein a product blank comprises a serially stacked plurality of foam sheets (Column 6, 38-53; Column 14, lines 41-58). Hurley and the instant specification are combinable because they are concerned with a similar technical field, namely, methods of compression molding polymer materials. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Godfrey’s stacked foam sheets during the instant specification’s molding process in order to produce an article that meets exclusive end use specifications that require multilayer products.

Regarding Claim 13, the instant specification shows the process as claimed as discussed in the rejection of Claim 12 above, but it does not show that compressing a product for 5 to 10 minutes is “characteristic” or “traditional”. Godfrey shows that it is known to carry out a compression molding process wherein the product is held in said compressed and heated state for 10 minutes (Column 4, lines 45-46). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Godfrey’s molding time as a processing parameter during the instant specification’s molding process in order to produce an article that requires presence of such processing parameters.

Regarding Claim 15, the instant specification shows the process as claimed as discussed in the rejection of Claim 14 above, including showing using PVDF foam sheets, but it does not

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show that compressing stacked sheets is “characteristic” or “traditional”. Hurley shows that it is known to carry out a method wherein a product blank comprises a serially stacked plurality of foam sheets (Column 6, 38-53; Column 14, lines 41-58). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Godfrey’s stacked foam sheets during the instant specification’s molding process in order to produce an article that meets exclusive end use specifications that require multilayer products.

Regarding Claim 16, the instant specification shows the process as claimed as discussed in the rejection of Claim 14 above, but it does not show that compressing a product for 5 to 10 minutes is “characteristic” or “traditional”. Godfrey shows that it is known to carry out a compression molding process wherein the product is held in said compressed and heated state for 10 minutes (Column 4, lines 45-46). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Godfrey’s molding time as a processing parameter during the instant specification’s molding process in order to produce an article that requires presence of such processing parameters.

Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the instant specification, in view of Godfrey, further in view of Potter et al. (U.S. Patent 6,971,193).

Regarding Claim 22, the instant specification shows that it is “characteristic” and “traditional” to carry out a method of forming a PVDF article (para 0025-0026), placing a PVDF foam form in a mold between platens of a heated molding press (para 0025-0026); volumetrically compressing said product blank between said platens (para 0026); and holding the compressed and heated product for a time (para 0026). The instant specification does not show

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that it is "characteristic" and "traditional" to compress to a specific compression ratio at a temperature between 300F and 350F for a time to displace air from the foam. Godfrey shows that it is known to carry out a method for compressing polymers including volumetrically compressing the product blank between platens by a ratio of 7:1 while heating said blank between 300F and 350F and holding said compressed and heated product for a time sufficient to displace substantially all volatiles from said PVDF foam (Column 3, lines 23-26, 34-36, 39-41). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Godfrey's molding conditions as processing parameters during the instant specification's molding process in order to produce an article that requires presence of such processing parameters. The instant specification also does not show that it is "characteristic" and "traditional" to compress a foam to form a consolidated elastomer having a Shore A Durometer of about 60 to 90. Potter et al., hereafter "Potter," show that it is known to carry out a method including molding a foam to form a consolidated elastomer having a Shore A Durometer of about 60 to 90 (Column 5, lines 40-41, 51-54). Potter and the instant specification are combinable because they are concerned with a similar technical field, namely, methods of compression molding polymer materials. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Potter's compression to a Shore A Durometer of about 60 to 90 as a process guideline during the instant specification's molding method in order to produce an article that meets exclusive end use specifications that require specific hardness values.

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Regarding Claim 23, the instant specification shows the process as claimed as discussed in the rejection of Claim 22 above, including a method wherein said PVDF foam form comprises a substantially free volume space of 70% to 90% (Para 0025), meeting applicant's claim.

Regarding Claim 24, the instant specification shows the process as claimed as discussed in the rejection of Claim 22 above, but it does not specifically show transformation of the foam to a translucent elastomer. Note however that the combination of the instant specification, Godfrey, and Potter's teachings show all of the claimed process steps and conditions and thus, the claimed effects and physical properties would implicitly be achieved by carrying out the disclosed process. Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Godfrey's processing parameters and Potter's compression teachings during the instant specification's molding process in order to produce an article that meets exclusive end use specifications that require translucency.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over the instant specification, Godfrey, and Pottery, further in view of Shigeo et al. (JP 10-007833). The instant specification does not show that it is "characteristic" and "traditional" to compress a PVDF foam to a state wherein its elongation percentage is 1429% to 1869%. Shigeo et al., hereafter "Shigeo," show that it is known to carry out a method wherein said foam is transformed to an elastomer having an elongation property of 1429% to 1869% (Abstract; para 0030 ("resiliency")). Shigeo and the instant specification are combinable because they are concerned with a similar technical field, namely, methods of compression molding polymer materials. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention



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was made to use Shigeo's compression to an elongation property of 1429% to 1869% as a process guideline during the instant specification's molding method in order to produce an article that meets exclusive end use specifications that require specific elongation values.

### ***Response to Arguments***

Applicant's arguments with respect to claims 11-16 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patent is cited to show the state of the art with regard to PVDF foam, in general:

U.S. Patent 4,692,381 to Pecsok

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A. Huson whose telephone number is 571-272-1198.

The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

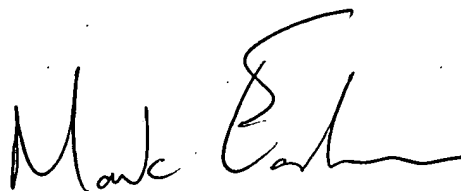
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Monica A Huson  
April 4, 2006



**MARK EASHOO, PH.D**  
**PRIMARY EXAMINER**

11 / Apr / 06